# IN THE UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF NORTH CAROLINA CHARLOTTE DIVISION

POLYGROUP MACAU LIMITED (BVI), Plaintiff,	)
	)
	)
	)
v.	) Civil Action No. 3:15-cv-552
WILLIS ELECTRIC CO., LTD.,	) TRIAL BY JURY IS DEMANDED
Defendant.	)

### **COMPLAINT**

1. This is an action for infringement of United States Patent Nos. 8,047,700 (the "700 Patent"), 8,235,737 (the "737 Patent"), 6,794,825 (the "825 Patent"), 8,863,416 (the "416 Patent"), 8,959,810 (the "810 Patent") and 9,119,495 (the "495 Patent") (collectively, the "Patents-in-Suit") arising from Defendant Willis Electric Co., Ltd.'s ("Defendant") manufacture, use, offer for sale, sale and importation of its infringing "pre-lit" artificial Christmas trees and Christmas light string systems, which compete directly with the patented QuickSet Christmas trees and SureBright light string system marketed, distributed and sold by Plaintiff Polygroup Macau Limited (BVI) ("Polygroup").

### **PARTIES**

2. Polygroup is a British Virgin Islands company with offices located at Offshore Incorporations Centre, P.O. Box 957, Road Town, Tortola, British Virgin Islands. Polygroup owns by assignment the entire right, title and interest in and to the '700 Patent, the '737 Patent, the '825 Patent, the '416 Patent, the '810 Patent and the '495 Patent, including the right to bring this suit for injunctive relief and damages.

3. Upon information and belief, Defendant is a Taipei, Taiwan limited company located at 6F, No. 2, Shun-An Street, Sindian City, Taipei, Taiwan.

### JURISDICTION AND VENUE

- 4. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a), as this action arises under the patent laws of the United States.
- 5. This Court has personal jurisdiction over Defendant because it has transacted business and committed acts of infringement in this district, and this action arises from that transaction of business and infringement.
- 6. Venue is proper in this district pursuant to 28 U.S.C. §§ 1391(b), 1391(c) and 1400(b). Defendant has transacted business and committed acts of infringement in this district, and this action arises from that transaction of business and infringement.
- 7. Specifically, Defendant has established distribution channels with well-known nationwide retailers, including Lowe's Companies, Inc. ("Lowe's"), headquartered at 1000 Lowe's Blvd., Mooresville, North Carolina, which is in this judicial district. Defendant directly offers for sale, sells and imports its products, including its infringing Christmas trees and light string systems, to Lowe's and other nationwide retailers.
- 8. Lowe's is one of only three U.S.-based companies to whom Defendant directly sells its products. Defendant's employees travel to the United States on average once or twice a year to visit direct customers, and have visited Lowe's retail stores in Charlotte, North Carolina, within this judicial district.
- 9. With respect to some of the claims involved in this suit, Defendant has previously stipulated that it is subject to specific personal jurisdiction in North Carolina and that North Carolina is a suitable venue for this suit.

### FACTUAL BACKGROUND

### A. The Artificial Christmas Tree and Light String System Industry

- 10. Polygroup markets, distributes and sells artificial pre-lit Christmas trees and light string systems to retailers in the United States, including its patented QuickSet Christmas tree and patented SureBright light string system. The SureBright light string system is sold individually, or more commonly, as part of pre-lit Christmas trees and other products.
- 11. Defendant manufactures, uses, offers for sale, sells and imports artificial pre-lit Christmas trees and Christmas light string systems (Defendant's "Infringing Pre-Lit Trees" and "Infringing Light String Systems") to retailers in the United States, including in this judicial district. Defendant's Infringing Pre-Lit Trees and Infringing Light String Systems infringe one or more claims of the Patents-in-Suit.
- 12. Defendant's Infringing Pre-Lit Trees include all Willis "One Plug" or "Quick Connect" artificial trees, including but not limited to the following specific models of trees: Holiday Living # 17, Holiday Living # 18, the Holiday Living # 20, Jaclyn Smith Collection #64A, Jaclyn Smith Collection #64B, Jaclyn Smith Collection #77A, Jaclyn Smith Collection #77B, Jaclyn Smith Collection #81A and Jaclyn Smith Collection #81B, all of which are manufactured, distributed, offered for sale, sold and imported to retailers in the United States, including to Lowe's, headquartered in this judicial district.
- 13. Defendant's Infringing Light String Systems, including the 7' Clearwater Cashmere Slim Profile w/500 Clear Never Out Lights; the 7' Clearwater Cashmere Slim w/500 Clear Never Out Lights; the 7' Clearwater Cashmere Slim w/500 Multi Never Out Lights; the 7.5' 600 LT Hard Needle Pine, the Hobby Lobby Light Sample Tree X, the Hobby Lobby Tree K 4.5' Instant Shape Oregon Fir, the Meijer Tree R- Prelit PE PVC 7.5' and the Home Depot

- 7.5' Snowy, are manufactured, distributed, offered for sale, sold and imported as part of certain pre-lit Christmas trees to retailers in the United States, including to Lowe's, headquartered in this judicial district.
- 14. Defendant's Infringing Pre-Lit Trees and Infringing Light String Systems compete directly with those marketed, distributed and sold by Polygroup to retailers in the United States.

### B. The Patents-in-Suit

- 15. The '700 Patent, entitled "Light String System," issued on November 1, 2011. (A true and correct copy of the '700 Patent is attached hereto as Exhibit 1.)
- 16. The '737 Patent, entitled "Light String System," issued on August 7, 2012. (A true and correct copy of the '737 Patent is attached hereto as Exhibit 2.)
- 17. The '825 Patent, entitled "Decorative Tree with Electronic Light Controller," issued on September 21, 2004. (A true and correct copy of the '825 Patent is attached hereto as Exhibit 3.)
- 18. The '416 Patent, entitled "Powered Tree Construction," issued on October 21,2014. (A true and correct copy of the '416 Patent is attached hereto as Exhibit 4.)
- 19. The '810 Patent, entitled "Powered Tree Construction," issued on February 24,2015. (A true and correct copy of the '810 Patent is attached hereto as Exhibit 5.)
- 20. The '495 Patent, entitled "Powered Tree Construction," issued on September 1, 2015. (A true and correct copy of the '495 Patent is attached hereto as Exhibit 6.)
- 21. Defendant has infringed, contributed to and induced infringement of the Patentsin-Suit, and Defendant is infringing and is inducing the infringement of the Patents-in-Suit, by

making, using, selling, offering to sell and importing into the United States its Infringing Light String Systems.

# C. Defendant was previously enjoined from infringing the '700 Patent

22. In December 2009, Defendant was sued by GP Ltd. ("GP"), a sister company of Polygroup, for infringement of U.S. Patent No. 7,581,870 (the "'870 Patent"). On March 11, 2010, a Consent Final Judgment and Permanent Injunction (the "Permanent Injunction") was entered against Defendant, and Defendant was:

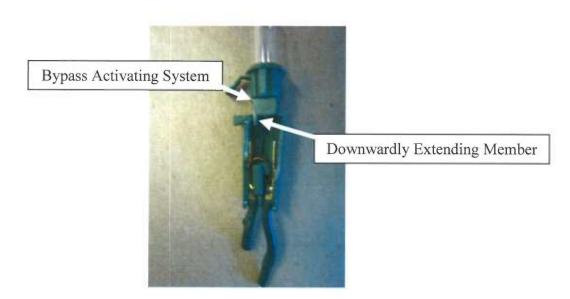
"permanently ENJOINED from manufacturing, using, offering for sale, selling or importing into the United States any Christmas light string system that infringes the '870 Patent, or any issued claim of the pending continuation application (Application No. 12/505,067) of the '870 Patent...."

(A true and correct copy of the Permanent Injunction is attached hereto as Exhibit 7.)

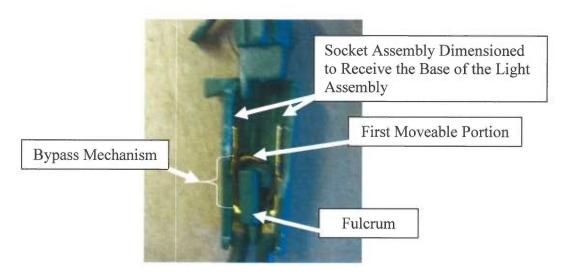
- 23. Despite that injunction, Defendant again manufactured, used, offered for sale, sold and/or imported into the United States products that infringed the '870 Patent. As a result, GP was forced to bring a motion for contempt of court against Defendant in December 2010.
- 24. On March 31, 2011, Defendant was found in contempt for having violated the Permanent Injunction. Just seven months later, on November 1, 2011, the "pending continuation application (Application No. 12/505,067)" referenced in the Permanent Injunction issued as the '700 Patent.
- 25. Given that it was permanently enjoined from infringing any claims that issued from Application No. 12/505,067, Defendant had an affirmative legal obligation to apprise itself of the claims that issued from Application No. 12/505,067 at the time they issued as the '700 Patent, and to avoid making, using, offering for sale, selling and/or importing into the United States any products that infringe upon those claims. Thus, Defendant's infringement of such claims is willful and deliberate.

## COUNT I (Infringement of the '700 Patent)

- 26. Polygroup repeats each allegation of paragraphs 1 through 25 as if fully set forth herein.
- 27. Defendant has directly infringed the '700 Patent by making, using, offering to sell, selling and/or importing its Infringing Light String Systems. All of Defendant's Infringing Light String Systems infringe at least claim 1 of the '700 Patent in substantially the same way.
- 28. Claim element 1(a) of the '700 Patent recites "A lamp system." Defendant's Infringing Light String Systems are lamp systems, for example, the lamp systems sold on the Clearwater Cashmere Christmas tree.
- 29. Claim element 1(b) of the '700 Patent recites "a light assembly comprising a light source and a base." Defendant's Infringing Light String Systems, including, for example, the Clearwater Cashmere, include a light assembly comprising a light source and a base.
- 30. Claim element 1(c) of the '700 Patent recites "the base comprising a bypass activating system extending downwardly from the base." Defendant's Infringing Light String Systems, including, for example, the Clearwater Cashmere, include a base comprising a bypass activating system extending downwardly from the base, as shown below:



- 31. Claim element 1(d) of the '700 Patent recites "the bypass activating system comprising a single downwardly extending member." Defendant's Infringing Light String Systems, including, for example, the Clearwater Cashmere, include a bypass activating system comprising a single downwardly extending member, as shown above.
- 32. Claim element 1(e) of the '700 Patent recites "a socket assembly dimensioned to receive via insertion the base of the light assembly, the socket assembly incorporating a bypass mechanism moveable between a first position and a second position." Defendant's Infringing Light String Systems, including, for example, the Clearwater Cashmere, include a socket assembly dimensioned to receive via insertion the base of the light assembly which incorporates a bypass mechanism moveable between a first position and a second position, as shown below:



- 33. Claim element 1(f) of the '700 Patent recites "the bypass mechanism comprising a first moveable portion and comprising only conductive material." Defendant's Infringing Light String Systems, including, for example, the Clearwater Cashmere, include a bypass mechanism comprising a first moveable portion and comprising only conductive material, as shown above.
- 34. Claim element 1(g) of the '700 Patent recites "wherein the socket assembly comprises a fulcrum." The socket assembly of Defendant's Infringing Light String Systems, including, for example, the Clearwater Cashmere, includes a fulcrum, as shown above.
- 35. Claim element 1(h) of the '700 Patent recites "wherein in the first position, current flow is bypassed from the light assembly, and across the socket assembly." When the bypass mechanism of Defendant's Infringing Light String Systems, including, for example, the bypass mechanism of the lamps sold on the Clearwater Cashmere, is in the first position, shown below, current flow is bypassed from the light assembly, and across the socket assembly.





- 36. Claim element 1(i) of the '700 Patent recites "wherein in the second position, current flow is directed through the light assembly." When the bypass mechanism in Defendant's Infringing Light String Systems, including, for example, the bypass mechanism of the Clearwater Cashmere, is in the second position, shown above, current flow is directed through the light assembly.
- 37. Claim element 1(j) of the '700 Patent recites "wherein upon insertion of the base of the light assembly into the socket assembly, the single downwardly extending member of the bypass activating system activates the first moveable portion of the bypass mechanism, disengaging it from a first internal side wall of the socket assembly, wherein the bypass mechanism is placed in the second position." When the base of the light assembly is inserted into the socket assembly of Defendant's Infringing Light String Systems, including, for example, in the socket assembly of the Clearwater Cashmere, the downwardly extending member of the bypass activating system disengages the first moveable portion of the bypass mechanism from an internal side wall of the socket assembly, and the bypass mechanism is placed in the second position, as shown below:



38. Claim element 1(k) of the '700 Patent recites "wherein upon removal of the base of the light assembly from the socket assembly, the first moveable portion of the bypass mechanism returns to engagement with the first internal side wall of the socket assembly, wherein the bypass mechanism is placed in the first position." When the base of the light assembly is removed from the socket assembly in Defendant's Infringing Light String Systems, including, for example, in the socket assembly of the Clearwater Cashmere, the first moveable portion of the bypass mechanism returns to engagement with an internal side wall of the socket assembly, and the bypass mechanism is placed in the first position, as shown below:



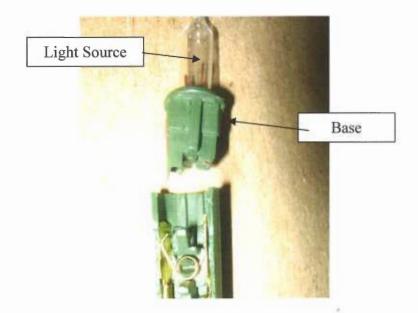
- 39. Defendant indirectly infringes the '700 Patent by inducing others, such as distributors, wholesalers, retailers, importers and end users, to infringe the '700 Patent in this District and elsewhere in the United States, in violation of 35 U.S.C. § 271(b).
- 40. Defendant had actual knowledge of the '700 Patent at least as early as October 7, 2013 when Polygroup filed an action in this District accusing Defendant of infringing the '700 Patent.
- 41. Defendant has induced and continues to induce infringement of the '700 Patent by intending that others infringe the '700 Patent by making, using, offering to sell, selling and/or importing its Infringing Light String Systems.
- 42. Defendant designed its Infringing Light String Systems such that they would each infringe one or more claims of the '700 Patent.
- 43. Defendant provides its Infringing Light String Systems to others, such as distributors, wholesalers, retailers, importers and end users, with the intent that its Infringing Light String Systems be made, used, offered for sale, sold and/or imported in the United States.

- 44. Defendant specifically targets the United States market for its Infringing Light String Systems and actively induces others, such as distributors, wholesalers, retailers, importers and end users to directly infringe one or more claims of the '700 Patent by making, using, offering to sell, selling and/or importing its Infringing Light String Systems.
- 45. Defendant also provides others, such as distributors, wholesalers, retailers, importers and end users, with instructions, user guides and technical specifications for its Infringing Light String Systems. When others follow such instructions, user guides, and/or technical specifications, they directly infringe one or more claims of the '700 Patent.
- 46. Defendant knows that by providing such instructions, user guides and/or technical specifications, others, such as distributors, wholesalers, retailers, importers and end users, follow those instructions, user guides and/or technical specifications, and directly infringe the '700 Patent. Defendant thus knows and intends that its actions actively induce infringement.
- 47. Defendant's infringement of the '700 Patent has been and continues to be willful and deliberate.
- 48. As a result of Defendant's infringement of the '700 Patent, Polygroup has suffered substantial monetary damages, although a monetary award is inadequate to fully compensate Polygroup for the harm it has suffered.
- 49. As a result of Defendant's infringement of the '700 Patent, Polygroup has suffered irreparable harm, and will continue to suffer irreparable harm unless that infringement is enjoined by this Court.

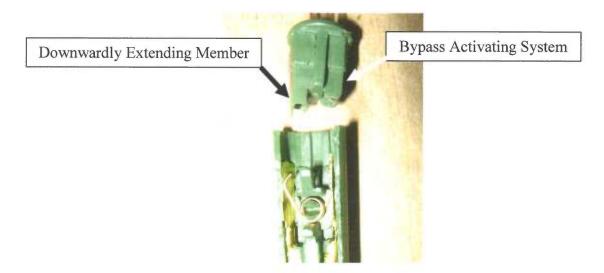
# COUNT II (Infringement of the '737 Patent)

50. Polygroup repeats each allegation of paragraphs 1 through 49 as if fully set forth herein.

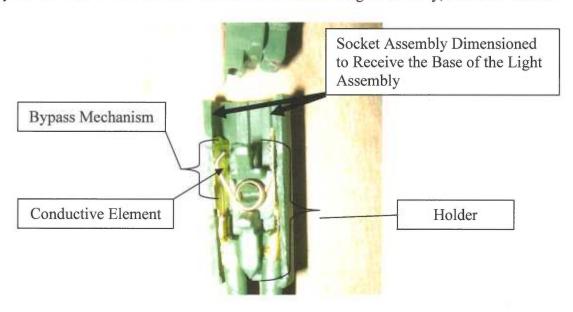
- 51. Defendant has directly infringed the '737 Patent by making, using, offering to sell, selling and/or importing its Infringing Light String Systems. All of Defendant's Infringing Light String Systems infringe at least claim 1 of the '737 Patent in substantially the same way.
- 52. Claim element 1(a) of the '737 Patent recites "A lamp system." Defendant's Infringing Light String Systems are lamp systems, including for example, the lamp systems sold on the Hobby Lobby Light Sample Tree X.
- 53. Claim element 1(b) of the '737 Patent recites "a light assembly comprising a light source and a base." Defendant's Infringing Light String Systems, including, for example, the Hobby Lobby Light Sample Tree X, include a light assembly comprising a light source and a base, as shown below:



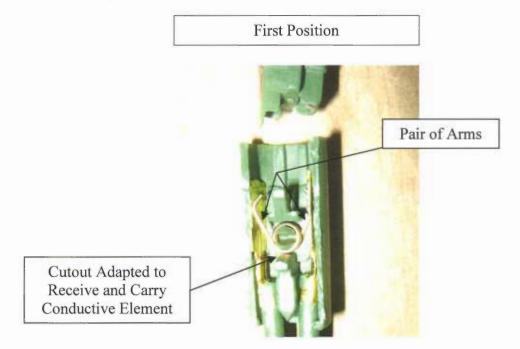
54. Claim element 1(c) of the '737 Patent recites "the base comprising a bypass activating system extending downwardly from the base." Defendant's Infringing Light String Systems, including, for example, the Hobby Lobby Light Sample Tree X, include a bypass activating system extending downwardly from the base, as shown below:



- 55. Claim element 1(d) of the '737 Patent recites "the bypass activating system comprising a first downwardly extending member." Defendant's Infringing Light String Systems, including, for example, the Hobby Lobby Light Sample Tree X, include a bypass activating system with a first downwardly extending member, as shown above.
- 56. Claim element 1(e) of the '737 Patent recites "a socket assembly dimensioned to receive via insertion the base of the light assembly." Defendant's Infringing Light String Systems, including, for example, the Hobby Lobby Light Sample Tree X, include a socket assembly dimensioned to receive via insertion the base of the light assembly, as shown below:



- 57. Claim element 1(f) of the '737 Patent recites "a bypass mechanism fittable within the socket assembly and comprising a holder and conductive element." Defendant's Infringing Light String Systems, including, for example, the Hobby Lobby Light Sample Tree X, include a bypass mechanism fittable within the socket assembly that includes a holder and conductive element, as shown above.
- 58. Claim element 1(g) of the '737 Patent recites "the holder includes a cutout along its width adapted to receive and carry the conductive element therein." Defendant's Infringing Light String Systems, including, for example, the Hobby Lobby Light Sample Tree X, include a holder in the bypass mechanism with a cutout along its width adapted to receive and carry the conductive element, as shown below:



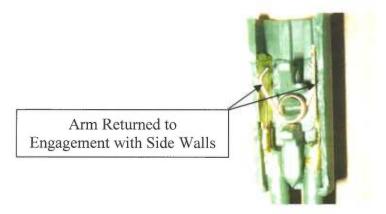
59. Claim element 1(h) of the '737 Patent recites "the conductive element comprising a pair of arms extending the length of the diameter of the socket, wherein one or both of the arms of the conductive element is moveable between a first position and a second position." The conductive element of Defendant's Infringing Light String Systems, including, for example,

the conductive element of the Hobby Lobby Light Sample Tree X, include a conductive element in the bypass mechanism that includes a pair of arms extending the length of the diameter of the socket, wherein one or both of the arms of the conductive element is moveable between a first position and a second position, as shown above.

- 60. Claim element 1(i) of the '737 Patent recites "wherein when the conductive element is in the first position, current flow is bypassed from the light assembly, and across the socket assembly." When the conductive element of Defendant's Infringing Light String Systems, including, for example, the conductive element of the Hobby Lobby Light Sample Tree X, is in the first position, as shown above, current flow is bypassed from the light assembly and across the socket assembly.
- 61. Claim element 1(j) of the '737 Patent recites "wherein [when the conductive element is] in the second position, current flow is directed through the light assembly." When the conductive element of Defendant's Infringing Light String Systems, including, for example, the conductive element of the Hobby Lobby Light Sample Tree X, is in the second position, as shown below, current flow is directed through the light assembly.
- 62. Claim element 1(k) of the '737 Patent recites "wherein upon insertion of the base of the light assembly into the socket assembly, the first downwardly extending member of the bypass activating system activates one arm of the conductive element, disengaging it from a first internal side wall of the socket assembly, wherein the bypass mechanism is placed in the second position." When the base of the light assembly is inserted into the socket assembly of Defendant's Infringing Light String Systems, including, for example, the socket assembly of the lamps sold on the Hobby Lobby Light Sample Tree X, the downwardly extending member of the

bypass disengages one arm of the conductive element from a first internal side wall of the socket assembly, and the bypass mechanism is placed in the second position.

63. Claim element 1(l) of the '737 Patent recites "wherein upon removal of the base of the light assembly from the socket assembly, the first arm of the conductive element returns to engagement with the first and second internal side walls of the socket assembly, wherein the bypass mechanism is placed in the first position." When the base of the light assembly is removed from the socket assembly of Defendant's Infringing Light String Systems, including, for example, the socket assembly of the Hobby Lobby Light Sample Tree X, the first arm of the conductive element returns to engagement with the first and second internal side walls of the socket assembly, and the bypass mechanism is placed in the first position, as shown below:



- 64. Defendant indirectly infringes the '737 Patent by inducing others, such as distributors, wholesalers, retailers, importers and end users, to infringe the '737 Patent in this District and elsewhere in the United States, in violation of 35 U.S.C. § 271(b).
- 65. Defendant had actual knowledge of the '737 Patent at least as early as October 7, 2013 when Polygroup filed an action in this District accusing Defendant of infringing the '737 Patent.

- 66. Defendant has induced and continues to induce infringement of the '737 Patent by intending that others infringe the '737 Patent by making, using, offering to sell, selling and/or importing its Infringing Light String Systems.
- 67. Defendant designed its Infringing Light String Systems such that they would each infringe one or more claims of the '737 Patent.
- 68. Defendant provides its Infringing Light String Systems to others, such as distributors, wholesalers, retailers, importers and end users with the intent that its Infringing Light String Systems be made, used, offered for sale, sold and/or imported in the United States.
- 69. Defendant specifically targets the United States market for its Infringing Light String Systems and actively induces others, such as distributors, wholesalers, retailers, importers and end users to directly infringe one or more claims of the '737 Patent by making, using, offering to sell, selling and/or importing its Infringing Light String Systems.
- 70. Defendant also provides others, such as distributors, wholesalers, retailers, importers and end users, with instructions, user guides and technical specifications for its Infringing Light String Systems. When others follow such instructions, user guides, and/or technical specifications, they directly infringe one or more claims of the '737 Patent.
- 71. Defendant knows that by providing such instructions, user guides and/or technical specifications, others, such as distributors, wholesalers, retailers, importers and end users, follow those instructions, user guides and/or technical specifications, and directly infringe the '737 Patent. Defendant thus knows and intends that its actions actively induce infringement.
- 72. Defendant's infringement of the '737 Patent has been and continues to be willful and deliberate.

- 73. As a result of Defendant's infringement of the '737 Patent, Polygroup has suffered substantial monetary damages, although a monetary award is inadequate to fully compensate Polygroup for the harm it has suffered.
- 74. As a result of Defendant's infringement of the '737 Patent, Polygroup has suffered irreparable harm, and will continue to suffer irreparable harm unless that infringement is enjoined by this Court.

# COUNT III (Infringement of the '825 Patent)

- 75. Polygroup repeats each allegation of paragraphs 1 through 74 as if fully set forth herein.
- 76. Defendant has directly infringed the '825 Patent by making, using, offering to sell, selling and/or importing its "LED Multi-Function Trees," which infringe at least claim 1 of the '825 Patent. All of Defendant's LED Multi-Function Trees infringe at least claim 1 of the '825 Patent in substantially the same way. Defendant's Willis LED Multi-Function Trees include, but are not limited to, the Diamond Peak Tree.
- 77. Claim element 1(a) of the '825 Patent recites "A display control means for a plurality of electrical light elements on a decorative tree comprising." Defendant's LED Multi-Function Trees, including, for example, the Diamond Peak Tree, are decorative trees and include a control means used to control the lighting elements on the tree, as shown below:



78. Claim element 1(b) of the '825 Patent recites "said decorative tree is formed of top, middle and bottom portions." Defendant's LED Multi-Function Trees, including, for example, the Diamond Peak Tree, are formed of top, middle and bottom portions, as shown below:



- 79. Claim element 1(c) of the '825 Patent recites "said electrical light elements are arranged in at least three separate and independent sets, one set of light elements for each of said tree portions." Each of the bottom, middle and top portions of Defendant's LED Multi-Function Trees, including for example, the bottom, middle and top portions of the Diamond Peak Tree, for example, has its own separate and independent light set.
- 80. Claim element 1(d) of the '825 Patent recites "said control means has electronic circuit means adapted to receive electrical power from a power source and to supply such power to said light element sets in a desired selectable sequence to provide a variety of light displays for said tree." Defendant's LED Multi-Function Trees meet this element of claim 1 of the '825 Patent. Defendant advertises that its Diamond Peak Tree, for example, has eleven different lighting functions and that the user can change the light patterns on the tree at anytime "with a simple turn of the switch."
- 81. Claim element 1(e) of the '825 Patent recites "said control means includes a switch means for choosing said desired sequence." Defendant's LED Multi-Function Trees meet this element of claim 1 of the '825 Patent. Defendant advertises that the Diamond Peak Tree, for

example, has eleven different lighting functions and that the user can change the light patterns on the tree at anytime "with a simple turn of the switch."

- 82. Defendant indirectly infringes the '825 Patent by inducing others, such as distributors, wholesalers, retailers, importers and end users, to infringe the '825 Patent in this District and elsewhere in the United States, in violation of 35 U.S.C. § 271(b).
- 83. Defendant had knowledge of the '825 Patent at least as early as the filing of the Complaint.
- 84. Defendant has induced and continues to induce infringement of the '825 Patent by intending that others infringe the '825 Patent by making, using, offering to sell, selling and/or importing Defendant's LED Multi-Function Trees.
- 85. Defendant designed its LED Multi-Function Trees such that they would each infringe one or more claims of the '825 Patent.
- 86. Defendant provides its LED Multi-Function Trees to others, such as distributors, wholesalers, retailers, importers and end users with the intent that its LED Multi-Function Trees be made, used, offered for sale, sold and/or imported in the United States.
- 87. Defendant specifically targets the United States market for its LED Multi-Function Trees and actively induces others, such as distributors, wholesalers, retailers, importers and end users to directly infringe one or more claims of the '825 Patent by making, using, offering to sell, selling and/or importing its LED Multi-Function Trees.
- 88. Defendant also provides others, such as distributors, wholesalers, retailers, importers and end users, with instructions, user guides and technical specifications for its LED Multi-Function Trees. When others follow such instructions, user guides and/or technical specifications, they directly infringe one or more claims of the '825 Patent.

- 89. Defendant knows that by providing such instructions, user guides and/or technical specifications, others, such as distributors, wholesalers, retailers, importers and end users, follow those instructions, user guides and/or technical specifications, and directly infringe the '825 Patent. Defendant thus knows and intends that its actions actively induce infringement.
- 90. Defendant's infringement of the '825 Patent has been and continues to be willful and deliberate.
- 91. As a result of Defendant's infringement of the '825 Patent, Polygroup has suffered substantial monetary damages, although a monetary award is inadequate to fully compensate Polygroup for the harm it has suffered.
- 92. As a result of Defendant's infringement of the '825 Patent, Polygroup has suffered irreparable harm, and will continue to suffer irreparable harm unless that infringement is enjoined by this Court.

# COUNT IV (Infringement of the '416 Patent)

- 93. Polygroup repeats each allegation of paragraphs 1 through 92 as if fully set forth herein.
- 94. Defendant has directly infringed the '416 Patent by making, using, offering to sell, selling and/or importing its Infringing Pre-Lit Trees. Defendant's Infringing Pre-Lit Trees infringe at least claim 1 of the '416 Patent in substantially the same way.
- 95. Claim element 1(a) of the '416 Patent recites "An artificial tree." Defendant's Infringing Pre-Lit Trees are artificial trees. The Holiday Living #20 Tree, for example, is an artificial Christmas tree.
- 96. Claim element 1(b) of the '416 Patent recites "a plurality of tree trunk sections, the trunk sections forming a trunk of the artificial tree." Defendant's Infringing Pre-Lit Trees,

including, for example, the Holiday Living #20 Tree, comprise a plurality of tree trunk sections forming a trunk of an artificial tree.

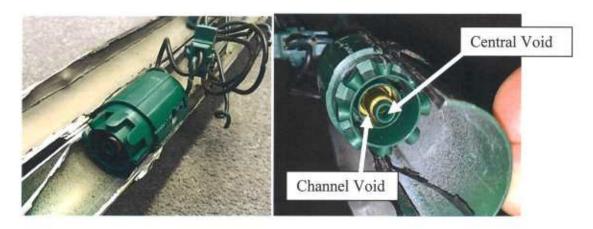
- 97. Claim element 1(c) of the '416 Patent recites "a first power distribution subsystem disposed within an inner void of a first trunk section of the plurality of tree trunk sections, the first power distribution subsystem comprising a male end, the male end having a central prong and a channel prong."
- 98. Defendant's Infringing Pre-Lit Trees, include a first power distribution subsystem disposed within an inner void of a first trunk section of the plurality of tree trunk sections, the first power distribution subsystem comprising a male end, the male end having a central prong and a channel prong. The Holiday Living #20 Tree, for example, includes a first power distribution system within an inner void at the bottom end of the middle trunk section of the tree. That power distribution system includes a male end with a central prong and a channel prong, as shown below:



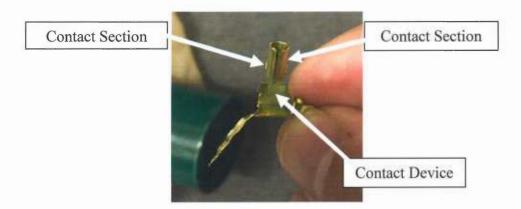
99. Claim element 1(d) of the '416 Patent recites "a second power distribution subsystem disposed within an inner void of a second trunk section of the plurality of tree trunk

sections, the second power distribution subsystem comprising a female end, the female end having a central void and a channel void."

100. Defendant's Infringing Pre-Lit Trees include a second power distribution subsystem disposed within an inner void of a second trunk section of the plurality of tree trunk sections, the second power distribution subsystem comprising a female end, the female end having a central void and a channel void. The Holiday Living #20 Tree, for example, has a second power distribution system within an inner void at the top end of the bottom trunk section of the tree which includes a female end with a central void and a channel void, as shown below:



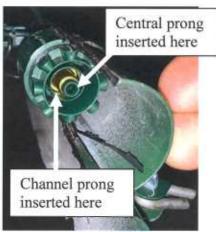
- 101. Claim element 1(e) of the '416 Patent recites "the central void having a contact device disposed at least partially therein, the contact device comprising one or more spring activated contact sections."
- 102. Defendant's Infringing Pre-Lit Trees include a central void having a contact device disposed at least partially therein, the contact device comprising one or more spring activated contact sections. The central void of the second power distribution system of the Holiday Living #20 Tree, for example, contains a contact device that has two sections, as shown, that utilize spring action when flexed outward by the central prong of the male end, as shown below:



- 103. Claim element 1(f) of the '416 Patent recites "wherein the central prong of the male end is configured to engage the central void of the female end and the channel prong of the male end is configured to engage the channel void of the female end to conduct electricity between the first power distribution subsystem and the second power distribution subsystem."
- 104. Defendant's Infringing Pre-Lit Trees are designed so that the central prong of the male end is configured to engage the central void of the female end and the channel prong of the male end is configured to engage the channel void of the female end to conduct electricity between the first power distribution subsystem and the second power distribution subsystem. When the bottom section of the Holiday Living #20 Tree, for example, is joined to the middle section, and when the middle section is joined to the top section, the central prong of the male end of the first power distribution system engages the central void of the female end of the second power distribution system, and the channel prong of the male end of the first power distribution system engages the channel void of the female end of the second power distribution system to conduct electricity between the first power distribution system and the second power distribution system, as shown below:

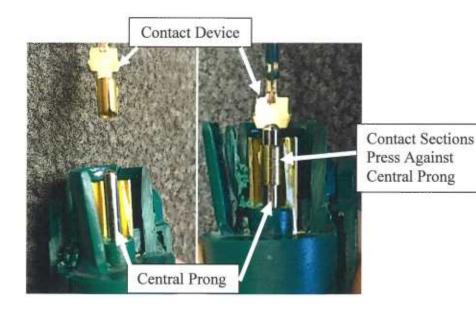






105. Claim element 1(g) of the '416 Patent recites "wherein, when the central prong engages the central void, the central prong pushes a spring activated contact section of the one or more spring activated contact sections causing the spring activated contact section to press against the central prong to maintain electrical contact between the central prong and the contact device."

106. Defendant's Infringing Pre-Lit Trees are designed so that when the central prong of the male end engages the central void of the female end, the central prong pushes the spring activated contact sections of the contact device outward, causing the contact sections to use spring action to press against the central prong to maintain electrical contact between the central prong and the contact device. The spring tendency of the contact sections to maintain their shape causes the two sections to press inwardly against the prong. As the central prong of the male end of the Holiday Living #20 Tree, for example, is inserted into the central void of the female end, the prong pushes the contact sections of the contact device in the female end outward, causing the contact sections to use spring action to spring back against the prong to maintain electrical contact, as shown below:



- 107. Defendant indirectly infringes the '416 Patent by inducing others, such as distributors, wholesalers, retailers, importers and end users, to infringe the '416 Patent in this District and elsewhere in the United States, in violation of 35 U.S.C. § 271(b).
- 108. Defendant had knowledge of the '416 Patent at least as early as the filing of the Complaint.
- 109. Defendant has induced and continues to induce infringement of the '416 Patent by intending that others infringe the '416 Patent by making, using, offering to sell, selling and/or importing Defendant's Infringing Pre-Lit Trees.
- 110. Defendant designed its Infringing Pre-Lit Trees such that they would each infringe one or more claims of the '416 Patent.
- 111. Defendant provides its Infringing Pre-Lit Trees to others, such as distributors, wholesalers, retailers, importers and end users with the intent that its Infringing Pre-Lit Trees be made, used, offered for sale, sold and/or imported in the United States.
- 112. Defendant specifically targets the United States market for its Infringing Pre-Lit
  Trees and actively induces others, such as distributors, wholesalers, retailers, importers and end

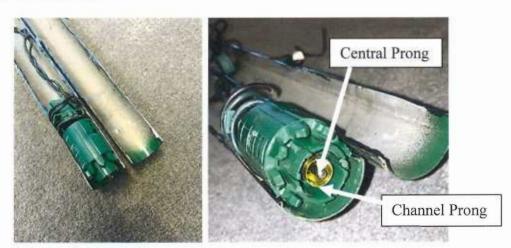
users to directly infringe one or more claims of the '416 Patent by making, using, offering to sell, selling and/or importing its Infringing Pre-Lit Trees.

- 113. Defendant also provides others, such as distributors, wholesalers, retailers, importers and end users, with instructions, user guides and technical specifications for its Infringing Pre-Lit Trees. When others follow such instructions, user guides, and/or technical specifications, they directly infringe one or more claims of the '416 Patent.
- 114. Defendant knows that by providing such instructions, user guides and/or technical specifications, others, such as distributors, wholesalers, retailers, importers and end users, follow those instructions, user guides and/or technical specifications, and directly infringe the '416 Patent. Defendant thus knows and intends that its actions actively induce infringement.
- 115. Defendant's infringement of the '416 Patent has been and continues to be willful and deliberate.
- 116. As a result of Defendant's infringement of the '416 Patent, Polygroup has suffered substantial monetary damages, although a monetary award is inadequate to fully compensate Polygroup for the harm it has suffered.
- 117. As a result of Defendant's infringement of the '416 Patent, Polygroup has suffered irreparable harm, and will continue to suffer irreparable harm unless that infringement is enjoined by this Court.

# COUNT V (Infringement of the '810 Patent)

118. Polygroup repeats each allegation of paragraphs 1 through 117 as if fully set forth herein.

- 119. Defendant has directly infringed the '810 Patent by making, using, offering to sell, selling and/or importing its Infringing Pre-Lit Trees. Defendant's Infringing Pre-Lit Trees infringe at least claim 1 of the '810 Patent in substantially the same way.
- 120. Claim element 1(a) of the '810 Patent recites "An artificial tree." Defendant's Infringing Pre-Lit Trees are artificial trees. The Holiday Living #20 Tree, for example, is an artificial Christmas tree.
- 121. Claim element 1(b) of the '810 Patent recites "a plurality of tree trunk sections." Defendant's Infringing Pre-Lit Trees, including, for example, the Holiday Living #20 Tree, comprise a plurality of tree trunk sections.
- 122. Claim element 1(c) of the '810 Patent recites "a male end of a first trunk section of the plurality of tree trunk sections, the male end having a central prong and a channel prong, the central prong and the channel prong configured to conduct electricity."
- 123. Defendant's Infringing Pre-Lit Trees include a male end of a first tree trunk section having a central prong and a channel prong which are configured to conduct electricity. The Holiday Living #20 Tree, for example, includes a male end at the bottom end of the middle trunk section of the tree that has a central prong and a channel prong configured to conduct electricity, as shown below:

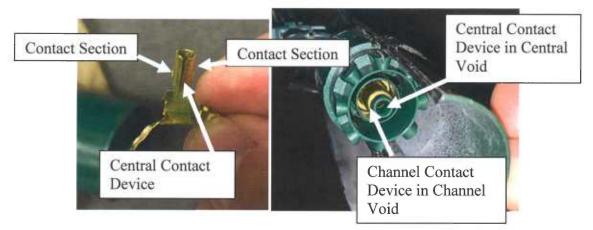


- 124. Claim element 1(d) of the '810 Patent recites "a female end of a second trunk section of the plurality of tree trunk sections, the female end having a central void and a channel void."
- 125. Defendant's Infringing Pre-Lit Trees include a female end of a second trunk section having a central void and a channel void. The Holiday Living #20 Tree, for example, includes a female end at the top end of the bottom trunk section of the tree with a central void and a channel void, as shown below:



- 126. Claim element 1(e) of the '810 Patent recites "the central void having a central contact device disposed at least partially therein, the central contact device comprising one or more spring activated contact sections, the channel void having a channel contact device disposed at least partially therein, the central contact device and the channel contact device configured to conduct electricity."
- 127. Defendant's Infringing Pre-Lit Trees have a central contact device and a channel contact device in the female end that meets this element of claim 1 of the '810 patent. The Holiday Living #20 Tree, for example, includes a central contact device inside of the central void which has one or more spring activated contact sections and a channel contact device in the

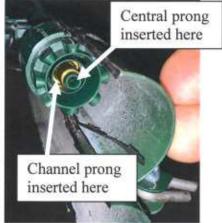
channel void, as shown below. Both the central contact device and the channel contact device in the Holiday Living #20 Tree are configured to conduct electricity.



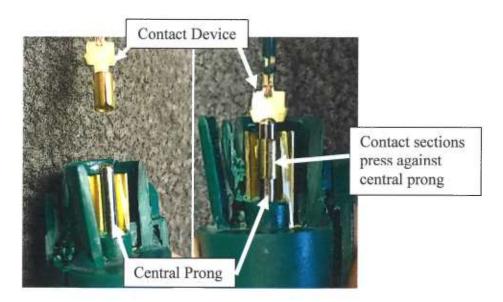
- 128. Claim element 1(f) of the '810 Patent recites "wherein the central prong of the male end is configured to engage the central contact device of the female end and the channel prong of the male end is configured to engage the channel contact device of the female end to conduct electricity between the male end of the first trunk section and the female end of the second trunk section."
- 129. The central prong of the male end of Defendant's Infringing Pre-Lit Trees engages the central contact device of the female end, and the channel prong of the male end engages the channel contact device of the female end to conduct electricity between the male end of the first trunk section and the female end of the second trunk section. The central prong of the male end of the Holiday Living #20 Tree, for example, engages the central contact device of the female end and the channel prong of the male end engages the channel contact device of the female end to conduct electricity between the ends of the two trunk sections, as shown below:







- 130. Claim element 1(g) of the '810 Patent recites "wherein, when the central prong engages the central contact device, the central prong pushes a spring activated contact section of the one or more spring activated contact sections causing the spring activated contact section to press against the central prong to maintain electrical contact between the central prong and the central contact device."
- of the male end engages the central contact device of the female end, the central prong pushes the spring activated contact sections outward, causing the contact sections to press against the central prong to maintain electrical contact between the central prong and the contact device. The spring tendency of the contact sections to maintain their shape causes the two sections to press inwardly against the prong. As the central prong of the Holiday Living #20 Tree, for example, is inserted into the central void of the female end, the prong pushes the contact sections of the contact device in the female end outward, causing the contact sections to use spring action to spring back against the prong to maintain electrical contact, as shown below:



- 132. Defendant indirectly infringes the '810 Patent by inducing others, such as distributors, wholesalers, retailers, importers and end users, to infringe the '810 Patent in this District and elsewhere in the United States, in violation of 35 U.S.C. § 271(b).
- 133. Defendant had knowledge of the '810 Patent at least as early as the filing of the Complaint.
- 134. Defendant has induced and continues to induce infringement of the '810 Patent by intending that others infringe the '810 Patent by making, using, offering to sell, selling and/or importing Defendant's Infringing Pre-Lit Trees.
- 135. Defendant designed its Infringing Pre-Lit Trees such that they would each infringe one or more claims of the '810 Patent.
- 136. Defendant provides its Infringing Pre-Lit Trees to others, such as distributors, wholesalers, retailers, importers and end users with the intent that its Infringing Pre-Lit Trees be made, used, offered for sale, sold and/or imported in the United States.
- 137. Defendant specifically targets the United States market for its Infringing Pre-Lit Trees and actively induces others, such as distributors, wholesalers, retailers, importers and end

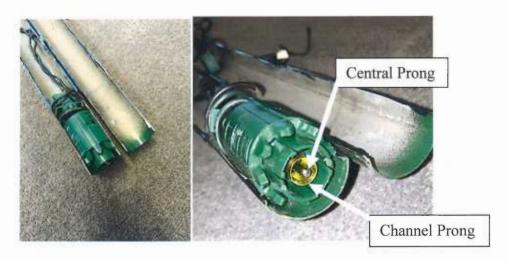
users to directly infringe one or more claims of the '810 Patent by making, using, offering to sell, selling and/or importing its Infringing Pre-Lit Trees.

- 138. Defendant also provides others, such as distributors, wholesalers, retailers, importers and end users, with instructions, user guides and technical specifications for its Infringing Pre-Lit Trees. When others follow such instructions, user guides, and/or technical specifications, they directly infringe one or more claims of the '810 Patent.
- 139. Defendant knows that by providing such instructions, user guides and/or technical specifications, others, such as distributors, wholesalers, retailers, importers and end users, follow those instructions, user guides and/or technical specifications, and directly infringe the '810 Patent. Defendant thus knows and intends that its actions actively induce infringement.
- 140. Defendant's infringement of the '810 Patent has been and continues to be willful and deliberate.
- 141. As a result of Defendant's infringement of the '810 Patent, Polygroup has suffered substantial monetary damages, although a monetary award is inadequate to fully compensate Polygroup for the harm it has suffered.
- 142. As a result of Defendant's infringement of the '810 Patent, Polygroup has suffered irreparable harm, and will continue to suffer irreparable harm unless that infringement is enjoined by this Court.

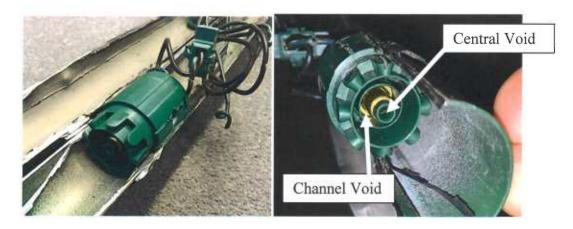
# COUNT VI (Infringement of the '495 Patent)

143. Polygroup repeats each allegation of paragraphs 1 through 142 as if fully set forth herein.

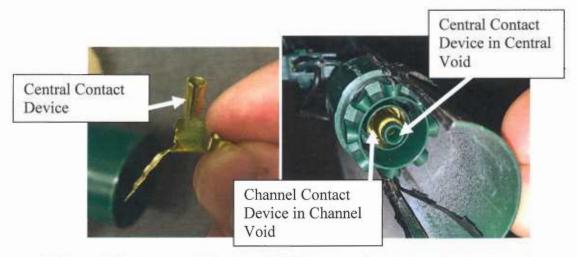
- 144. Defendant has directly infringed the '495 Patent by making, using, offering to sell, selling and/or importing its Infringing Pre-Lit Trees. Defendant's Infringing Pre-Lit Trees infringe at least claim 1 of the '495 Patent in substantially the same way.
- 145. Claim element 1(a) of the '495 Patent recites "An artificial tree." Defendant's Infringing Pre-Lit Trees are artificial trees. The Holiday Living #20 Tree, for example, is an artificial Christmas tree.
- 146. Claim element 1(b) of the '495 Patent recites "a plurality of tree trunk sections." Defendant's Infringing Pre-Lit Trees, including, for example, the Holiday Living #20 Tree, comprise a plurality of tree trunk sections.
- 147. Claim element 1(c) of the '495 Patent recites "a male end of a first trunk section of the plurality of tree trunk sections, the male end having a central prong and a channel prong, the central prong and the channel prong configured to conduct electricity."
- 148. Defendant's Infringing Pre-Lit Trees include a male end of a first tree trunk section having a central prong and a channel prong which are configured to conduct electricity. The Holiday Living #20 Tree, for example, includes a male end at the bottom end of the middle trunk section that has a central prong and a channel prong configured to conduct electricity, as shown below:



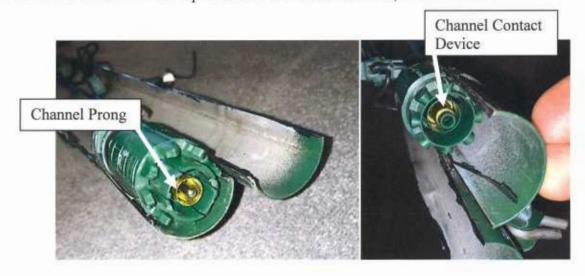
- 149. Claim element 1(d) of the '495 Patent recites "a female end of a second trunk section of the plurality of tree trunk sections, the female end having a central void and a channel void."
- 150. Defendant's Infringing Pre-Lit Trees include a female end of a second trunk section having a central void and a channel void. The Holiday Living #20 Tree, for example, includes a female end with a central void and a channel void at the top end of the bottom trunk section, as shown below:



- 151. Claim element 1(e) of the '495 Patent recites "the central void having a central contact device disposed at least partially therein, and the channel void having a channel contact device disposed at least partially therein, the channel contact device disposed around the central void, and the central contact device and the channel contact device configured to conduct electricity."
- patent. The Holiday Living #20 Tree, for example, includes a central contact device inside of a central void and a channel contact device in a channel void and surrounding a central void, as shown below. Both the central contact device and the channel contact device in the Holiday Living #20 Tree are configured to conduct electricity.



- 153. Claim element 1(f) of the '495 Patent recites "wherein the channel prong of the male end is configured to engage the channel contact device of the female end in a plurality of configurations, each configuration providing a different rotational alignment of the first trunk section with respect to the second trunk section."
- 154. The channel prong of the male end of Defendant's Infringing Pre-Lit Trees is configured to engage the channel contact device of the female end in a plurality of configurations, with each configuration providing a different rotational alignment of the first trunk section with respect to the second trunk section. In the Holiday Living #20 Tree, for example, the channel prong of the male end is circular and so is designed to engage the channel contact device in a plurality of configurations corresponding to different rotational alignments of the first trunk section with respect to the second trunk section, as shown below:



- 155. Defendant indirectly infringes the '495 Patent by inducing others, such as distributors, wholesalers, retailers, importers and end users, to infringe the '495 Patent in this District and elsewhere in the United States, in violation of 35 U.S.C. § 271(b).
- 156. Defendant had knowledge of the '495 Patent at least as early as the filing of the Complaint.
- 157. Defendant has induced and continues to induce infringement of the '495 Patent by intending that others infringe the '495 Patent by making, using, offering to sell, selling and/or importing Defendant's Infringing Pre-Lit Trees.
- 158. Defendant designed its Infringing Pre-Lit Trees such that they would each infringe one or more claims of the '495 Patent.
- 159. Defendant provides its Infringing Pre-Lit Trees to others, such as distributors, wholesalers, retailers, importers and end users with the intent that its Infringing Pre-Lit Trees be made, used, offered for sale, sold and/or imported in the United States.
- 160. Defendant specifically targets the United States market for its Infringing Pre-Lit Trees and actively induces others, such as distributors, wholesalers, retailers, importers and end users to directly infringe one or more claims of the '495 Patent by making, using, offering to sell, selling and/or importing its Infringing Pre-Lit Trees.
- 161. Defendant also provides others, such as distributors, wholesalers, retailers, importers and end users, with instructions, user guides and technical specifications for its Infringing Pre-Lit Trees. When others follow such instructions, user guides, and/or technical specifications, they directly infringe one or more claims of the '495 Patent.
- 162. Defendant knows that by providing such instructions, user guides and/or technical specifications, others, such as distributors, wholesalers, retailers, importers and end users, follow

those instructions, user guides and/or technical specifications, and directly infringe the '495 Patent. Defendant thus knows and intends that its actions actively induce infringement.

- 163. Defendant's infringement of the '495 Patent has been and continues to be willful and deliberate.
- 164. As a result of Defendant's infringement of the '495 Patent, Polygroup has suffered substantial monetary damages, although a monetary award is inadequate to fully compensate Polygroup for the harm it has suffered.
- 165. As a result of Defendant's infringement of the '495 Patent, Polygroup has suffered irreparable harm, and will continue to suffer irreparable harm unless that infringement is enjoined by this Court.

WHEREFORE, Polygroup requests that the Court enter appropriate orders and a judgment:

- A. Finding that Defendant has infringed the Patents-in-Suit, and that such infringement has been willful and deliberate;
- B. Enjoining Defendant, its officers, directors, employees, agents, licensees, successors and assigns, and all persons acting in concert with them, from further infringement of the Patents-in-Suit;
- C. Finding that Defendant's conduct as alleged herein constitutes an exceptional case under 35 U.S.C. § 285;
- D. Awarding Polygroup compensatory damages for Defendant's infringement of the Patents-in-Suit;
  - E. Trebling the damages assessed pursuant to 35 U.S.C. § 284;
  - F. Awarding Polygroup its costs and reasonable attorneys' fees; and

G. Awarding Polygroup such further relief as the Court deems just and proper.

In accordance with Rule 38 of the Federal Rules of Civil Procedure, Polygroup respectfully demands a jury trial of all issues triable to a jury in this action.

November 16, 2015

#### TROUTMAN SANDERS LLP

By: s/Anup M. Shah
Anup M. Shah
N.C. State Bar No. 37042
301 S. College Street, Suite 3400
Charlotte, NC 28202
Phone: (704) 998-4089
Fax: (704) 998-4051
anup.shah@troutmansanders.com

D. Kyle Deak N.C. State Bar No. 35799 434 Fayetteville Street, Suite 1900 Raleigh, NC 27601 Phone: (919) 835-4133 Fax: (919) 829-8725 kyle.deak@troutmansanders.com

Counsel for Plaintiff Polygroup Macau Limited (BVI)

Robert A. Angle (VSB No. 37691)
Dabney J. Carr, IV (VSB No. 28679)
TROUTMAN SANDERS LLP
P.O. Box 1122
Richmond, VA 23218
Phone: (804) 697-1200
Fax: (804) 697-1339
robert.angle@troutmansanders.com
dabney.carr@troutmansanders.com

Pro Hac Vice Applications to be Filed